

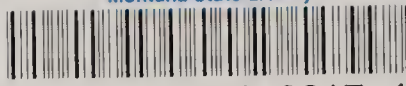
IMPORTATION AND POSSESSION OF EXOTIC WILDLIFE

A REPORT TO THE GOVERNOR OF MONTANA  
AND THE 58<sup>TH</sup> LEGISLATURE

Prepared by the Montana Department of Fish, Wildlife & Parks,  
Department of Agriculture, Department of Livestock  
And the Department of Public Health and Human Services

In response to  
House Joint Resolution No. 16  
2001 Montana Legislative Session

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## EXECUTIVE SUMMARY

For centuries, people have moved living organisms around the world. Numerous species of plants and animals, and their products, have been imported into the U.S. to be used as food, construction materials, ornamentals, curiosities, livestock, and pets. Organisms that have been moved from their native habitat to a new location are typically referred to as “non-native,” nonindigenous,” “exotic,” or “alien” to the new environment. Most U.S. food crops and domesticated animals are non-native species, and their beneficial value is obvious. For instance, domestic livestock are examples of non-native species that benefit mankind and are not invasive. Many other non-native species are simply benign. However, a small percentage cause serious problems in their new environments and are collectively known as “invasive species.” An invasive species is defined as a species that is 1) non-native to the ecosystem under consideration and 2) whose introduction causes or is likely to cause economic or environmental harm or harm to human health (Executive Order 13112, Appendix 1).

An extensive amount of work and organization has been done in the last few years to mount a national program aimed at addressing problems associated with invasive species. As part of the national program for control of invasive species, Montana has just completed an Aquatic Nuisance Species Management (ANS) Plan. The goal of that plan is first, to prevent the introduction of ANS in Montana and second, to develop control measures should an ANS be detected. The importance of the problem of invasive species on a national level has been further exemplified by the Western Governor’s Association (WGA) Policy Resolution 02-21 passed in June of 2002 and sponsored by, among others, Montana Governor Judy Martz. That resolution addresses undesirable or invasive aquatic, riparian, and terrestrial species and calls for the development and harmonization of uniform and scientifically based species lists, for the establishment of effective policies and procedures to prevent the introduction of those undesirable species, and for the development of educational programs to engender environmental stewardship. (WGA Policy Resolution 02-21, Appendix 2).

In 2001, the Montana Legislature passed HJR 16 calling for the Montana departments of Fish, Wildlife and Parks; Agriculture; Livestock; and Public Health and Human Services to prepare a report evaluating the potential threats of exotic wildlife to Montana, the status of current laws in place in Montana and laws in place in other states to address those threats. The legislation also requested that the departments identify solutions to minimize potentially harmful impacts from exotic wildlife species and identify specific exotic wildlife species that pose threats to the state.

The introduction of exotic wildlife species into Montana’s environment has the potential to cause deleterious effects both ecologically and economically. There are 6 primary issues of concern associated with exotic species:

- potentially serious threats to human safety

- transport of diseases or parasites from their place of origin
- threat of hybridization with native species
- severe habitat destruction or competition affecting a variety of wildlife populations
- predation by exotic species
- economic costs incurred in removing or controlling escaped exotic species or in mitigating damages that may have been caused

This report provides specific examples at the national and state levels of situations illustrating the effects of invasive species.

The departments of Fish, Wildlife and Parks (FWP); Livestock; Agriculture; and Public Health and Human Services each have responsibilities to regulate exotic wildlife species.

- FWP has limited authority to control the import of nonnative species of wildlife and issues permits to individuals within the state possessing both native and non-native species.
- Department of Livestock requires a certificate of veterinary inspection and an import permit for all animals for which importation into the state is allowed.
- Department of Agriculture protects agricultural interests with an inspection program to prevent the import of exotic pests or pathogens contaminating imported commodities.
- Department of Public Health and Human Services monitors and controls human health and safety issues and diseases transmissible to humans that may come from imported exotic animals.

Evaluation of the various departmental responsibilities and authorities has resulted in the identification of a need to coordinate efforts and provide better communication between the departments relating to the decision making process for importation of exotic wildlife. Authorization for these decision making powers, as well as for enforcement activities necessary to support the decisions, have also been identified as priorities.

Like Montana, many other states are in the process of evaluating current laws that provide protection from invasive or exotic species. Several states have recently instituted new laws and/or systems to provide mechanisms for protection. This report provides a summary of existing laws in other states with emphasis on surrounding states that have similar climates and therefore similar environmental concerns for the potential impacts of exotic or invasive species. Following the evaluation of programs in other states, this report will propose possible solutions for Montana intended to minimize the potentially harmful impacts of the importation and possession of exotic wildlife.

## 2001 Montana Legislature

About Bill -- Links

HOUSE JOINT RESOLUTION NO. 16

INTRODUCED BY HAINES, FRANKLIN, BISHOP, P. CLARK



A JOINT RESOLUTION OF THE SENATE AND THE HOUSE OF REPRESENTATIVES OF THE STATE OF MONTANA REQUESTING THAT THE DEPARTMENT OF FISH, WILDLIFE, AND PARKS, IN COOPERATION WITH THE DEPARTMENTS OF AGRICULTURE, LIVESTOCK, AND PUBLIC HEALTH AND HUMAN SERVICES, CONDUCT A STUDY ON THE IMPORTATION AND POSSESSION OF EXOTIC WILDLIFE AND REPORT THE RESULTS OF THE STUDY AND RECOMMENDATIONS TO THE GOVERNOR AND THE 58TH LEGISLATURE.

WHEREAS, there is an escalating international trend of possession and trade in exotic wildlife for personal use as well as for commercial purposes; and

WHEREAS, the introduction of some exotic wildlife into Montana may have undesirable or damaging effects on native wildlife and plant species, agricultural production, and human health and safety; and

WHEREAS, in order to minimize or avoid economic, ecological, and human health and safety impacts from some exotic wildlife, it may be necessary to control the importation into Montana and possession in Montana of exotic wildlife; and

WHEREAS, the Department of Fish, Wildlife, and Parks, the Department of Agriculture, the Department of Livestock, and the Department of Public Health and Human Services have longstanding involvement in and statutory obligations regarding the protection of native wildlife and plants, agricultural production, and human health and safety.

NOW, THEREFORE, BE IT RESOLVED BY THE SENATE AND THE HOUSE OF REPRESENTATIVES OF THE STATE OF MONTANA:

(1) That the Department of Fish, Wildlife, and Parks, in cooperation with the Departments of Agriculture, Livestock, and Public Health and Human Services, be requested to give priority to a study of the following issues:

- (a) evaluation of the threats that exotic wildlife may pose to the State of Montana;
- (b) evaluation of laws that protect Montana from the importation and possession of potentially harmful exotic wildlife;
- (c) evaluation of the successful and efficient implementation of laws from other states addressing importation and possession of exotic wildlife;

(d) compilation of a list of specific exotic wildlife that poses a threat or potential threat; and

(e) identification of possible solutions for the State of Montana to minimize the potentially harmful impacts of the importation and possession of exotic wildlife.

(2) That the Department of Fish, Wildlife, and Parks, in cooperation with the Departments of Agriculture, Livestock, and Public Health and Human Services, convene a working group of various stakeholders to assist the Departments in evaluating the issues listed in subsection (1).

(3) That the Department of Fish, Wildlife, and Parks, in cooperation with the Departments of Agriculture, Livestock, and Public Health and Human Services, actively solicit the participation of groups and individuals whose activities include the importation or possession of exotic wildlife, of Montana citizens, of state and local officials, and of any other persons or groups with interest in the outcome of the study.

(4) That the Department of Fish, Wildlife, and Parks, in cooperation with the Departments of Agriculture, Livestock, and Public Health and Human Services, be requested to:

(a) prepare, by October 1, 2002, a report of its findings and conclusions regarding the importation or possession of exotic wildlife; and

(b) identify options and make recommendations, including suggestions for legislation if appropriate, to the Governor and the 58th Legislature.

## **DEFINITIONS** (as used in this report, the following definitions apply)

**Domestic animal** means those animals which through long association with humans have been bred to a degree which has resulted in genetic changes affecting the color, temperament and conformation, or other attributes of the species to an extent that makes them unique and distinguishable from wild individuals of their species.

**Exotic wildlife** means a wildlife species not native to Montana; foreign or introduced.

**Hybrid** means any animal, gamete or egg that is produced by crossing at least one wild individual of a species with any other species or subspecies.

**Import** means to bring or cause an animal to be brought into Montana by any means and subsequently possess or use that animal for a personal, commercial, scientific, or educational use.

**Invasive species** means a species that is nonnative to the ecosystem under consideration and whose introduction causes or is likely to cause economic or environmental harm or harm to human health.

**Native species** means any species or subspecies of zoological animal that historically occurred in Montana and has not been introduced by humans or migrated into Montana as a result of human activity.

**Naturalized species** means any species or subspecies of zoological animal that is not native to Montana but has established a wild, self-sustaining population in Montana.

**Permit** means an official document issued by either the Montana Department of Livestock or the Montana Department of Fish, Wildlife & Parks after proper application which allows respectively the movement of animals or biologics into Montana or the possession of a particular species of animal in Montana.

**Wildlife** means fish, wild birds, amphibians, reptiles and wild mammals, including their viable gametes, fertilized eggs and hybrids. Wildlife includes native, naturalized, and nonnative species of animals occurring in the wild, captured from the wild, or born and raised in captivity.

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A total of 40 comments were also received from members of the public, pet store operators, and sportsperson groups concerning the import of exotic wildlife into Montana. Thirty seven responses favored increased control or prohibition on the import of exotics while three thought imports should be allowed or that current regulations were adequate.

## BACKGROUND

The mobility and diverse interests of the world population have fueled an escalating international trend of possession and trade in unusual animal species for personal and commercial purposes.

Translocation of plant, vertebrate and invertebrate species from one geographic location to another and subsequent introductions - whether intentional or unintentional - of potentially harmful species has been formally acknowledged as a problem of national significance. There is escalating concern that introduction and establishment of non-native or "exotic" species is becoming a growing economic and environmental crisis. One report indicates that the economic cost of invasive species to Americans is an estimated \$137 billion every year (Pimentel *et al.* 2000). In addition, scientists estimate that the listing of up to 46% of the plants and animals on the federal Endangered Species List can be attributed at least in part to the effects of invasive species (Wilcove *et al.* 1998). As a result of intentional and unintentional introductions, at least 4,500 species of foreign origin have established free-ranging populations in the U.S.

Records kept by the Montana Heritage Program for Montana indicate that 44 exotic vertebrate species (29 fish species, 2 amphibian species, 9 bird species, and 4 mammal species) have been introduced into Montana. Exotic animals that have been found in the Montana wilds include coati mundis, alligator, pirahhna, fallow deer, Sika deer, nutria and mouflon sheep. Until recently, it was assumed that many exotic species could not survive Montana winters, which reduced concern. The past few mild winters may require us to examine our reliance on severe winter weather to prevent the establishment of potentially harmful exotic species. More people are moving to Montana from other states and countries and they are asking for authorization to bring their exotic pets. There have been requests from people who intend to bring their pet African lions, Bengal tigers, Syrian bears, South American cougars, monkeys and a large variety of other animals. It is not known how many animals are imported into Montana without the required authorization. Many other states in the region are feeling the same pressures and evaluating their current procedures.

Currently, a comprehensive national policy on potentially harmful introductions is being developed in the U.S. The National Invasive Species Act of 1996 calls for the development of state and regional management plans to control invasive species. President Clinton signed Executive Order 13112 on invasive species on February 3, 1999 calling for the development of a National Invasive Species Management Plan which will rely heavily on federal and state regulatory efforts. The latest draft of the management plan was released in October of 2000. One of the objectives of the plan is to promote action at the local, state, tribal, and ecosystem levels.

In many cases, existing state laws were not designed to anticipate current trends in world trade of exotic wildlife species. The issues facing Montana, as a microcosm, are the same ones evaluated in the National Invasive Species Management Plan. For years, many federal agencies had been involved in invasive species prevention, but there had been little in the way of a coordinated, collective effort. Laws giving individual agencies authority were usually passed in response to specific crises. Overlaps and gaps in this array of laws often left regulatory agencies unsure of which authority to apply in any given case. On a smaller scale, the individuals involved in the preparation of this report found a similar situation to be true concerning existing laws for the import of exotic wildlife into Montana. Potential solutions identified for the State of Montana to minimize the potentially harmful impacts of the importation and possession of exotic wildlife are presented at the end of this report.

## THREATS FROM THE IMPORTATION OF EXOTIC WILDLIFE

The world has many examples of intentional as well as inadvertent introductions of non-indigenous species that have turned into disasters. The mongoose (Hawaii), rabbits (Australia) and the Norway rat, nutria and Russian Boar (America) are some of the most well-known cases. The pet and aquarium trades pose a potential threat due to importation of exotic species that may escape or be introduced into the environment when their owners tire of them. The long-term consequences of establishment of feral populations of these species to wildlife communities and agricultural enterprises are unknown. By the time detrimental results have occurred, it may be too late to undo the damage.

The threats posed by the importation and possession of exotic wildlife may result in either environmental or economic impacts. Environmental impacts cover a broad range of categories and affect not only humans, but also wildlife and domestic animal populations. The economic impacts may be direct in terms of the costs of control or mitigation of damage, or indirect in terms of damage to existing habitat or animal populations. These threats will be discussed individually based on the following categories:

- potentially serious threats to human safety
- transport of diseases or parasites from their place of origin resulting in human health and animal health issues
- threat of hybridization with native species
- severe habitat destruction or competition affecting a variety of wildlife populations
- predation by exotic species
- economic costs incurred in removing or controlling escaped exotic species or in mitigating damages that may have been caused

### Human Safety

Human safety issues stem from possession of exotic animals that have the potential to inflict damage on their owners or to the public. Potential injuries include bite wounds that cause trauma either directly or through the inoculation of poisons and mechanical injuries caused by constriction or force.

There have been reported incidents across the country where exotic wild animals have escaped from their enclosures and have attacked humans or animals. Adults and children have been mauled by privately owned tigers, bitten by monkeys, and strangled by snakes. The Animal Protection Institute (API) has compiled a list of incidents for the past 7 years. More information concerning injuries caused by exotic pets can be obtained on the API website at <http://www.api4animals.org/doc.asp?ID=321>.

Non-domesticated felines, such as lions, tigers, leopards, cougars and ocelots, are commonly kept as "pets." These exotic animals may be acceptable as "pets" when they

are young but have the potential to seriously injure or kill people and other animals as they mature. Adult exotic felines weigh between 300 to 500 pounds depending on the species, and may not ever be "domesticated." Even an animal that appears to be friendly and loving can, without warning, attack unsuspecting individuals including their owners.

It is estimated there are 10,000 - 60,000 privately owned tigers in the United States. Some are in theme parks or nonprofit sanctuaries, but most are in private individuals' hands. The number of pet tigers easily surpasses the 200 or so kept by zoos for display and species propagation and the 4,000 to 7,000 tigers that survive in the wilds of Siberia and the rest of Asia. The statistics compiled on injuries and fatalities from exotic pets indicate a potentially serious problem. Five people have been killed by tigers and 29 seriously hurt since 1998 according to Dr. Philip Nyhus, an assistant professor of ecology at Franklin and Marshall College. By comparison, fatal attacks on humans attributable to the nation's 55 million dogs average 12 a year.

Monkeys are the most commonly owned non-human primates. After the age of two, monkeys may exhibit unpredictable behavior. Males may become aggressive, and both males and females may bite to defend themselves and to establish dominance. Many monkey bites have been reported since 1990 and have resulted in serious injury to humans, whether the possessor, a neighbor, or a stranger on the street. A string of recent incidents in 2002 in the Flathead Valley resulted in at least 3 people being bitten by a 5 pound monkey whose owner brought it to public places. Two of those bitten required immediate medical attention.

Reptiles, including all types of snakes and lizards, may pose safety risks to humans as well. There have been many reported incidents of escapes, strangulations, and bites from pet reptiles. Snakes are the most common "pet" reptiles and have the potential to inflict serious injury through a bite or constriction.

### Transport of Diseases or Parasites

Exotic animals may be potential carriers of diseases such as Herpes B, salmonellosis, and rabies, all of which are communicable to humans.

Eighty to 90 percent of all macaque monkeys are infected with Herpes B or Simian B virus which is harmless to monkeys but fatal to 70 percent of people who contract it. Monkeys shed the virus intermittently in saliva or genital secretions during breeding season or at times of illness or stress. At any given time, about 2 percent of infected macaque monkeys are shedding the virus. A person who is bitten, scratched, sneezed upon or spit on by a macaque shedding the virus runs the risk of contracting the disease.

The CDC asserts that the increase in macaque monkeys in the pet trade may constitute an emerging infectious disease threat in the United States. Since 1992, there have been 24 well-documented cases of human infection of the virus, which resulted in 19 deaths.

Ninety percent of all reptiles carry and shed *Salmonella* in their feces. Iguanas, snakes, lizards, and turtles are common carriers of the bacteria. Reptiles that carry *Salmonella* do not show any symptoms. There is no simple test to tell which reptiles are carriers. Even those that are infected do not constantly shed the bacteria. The CDC recommends that children, people with compromised immune systems, and the elderly avoid all contact with reptiles and not possess them as pets.

In 1994 and 1995, the CDC received reports from 13 state health departments indicating that persons that had direct or indirect contact with pet reptiles contracted *Salmonella* infections. In addition, from 1996 through 1998, 16 state health departments reported similar cases of human *Salmonella* infections.

In 1996 and 1997, Montana reported its first two cases of human rabies, both fatal infections, and both apparently associated with exposure to rabid bats. Those occurrences were of great concern and prompted the State to heighten awareness of this disease among physicians, public health personnel, veterinarians, and the general public. Because the vast majority of rabies cases involve wildlife, both in Montana and nationwide, the public was urged to avoid contact with wildlife and not to adopt wildlife as pets.

A recent situation occurred in which prairie dogs distributed to other states and nations by a breeder in Texas were subsequently found to be infected with tularemia, a disease which may cause flu like symptoms and mortality in humans.

There are also many examples of potential threats exotic diseases and parasites may pose to agriculture including both livestock and crops. Certain species of hedgehogs are known to carry foot and mouth disease. Importation of foot and mouth disease virus into the United States could devastate the livestock industry if the disease were transmitted to cattle, sheep or pigs. West Nile virus (WNV) is an example of an exotic pathogen that may have been imported. Although the origin of WNV in the U.S. is still unknown, some scientists theorize it was introduced through the importation of unauthorized exotic bird species. The virus has now spread across the U.S. affecting humans, horses, birds, and several other animal species. As of September 1, 2002 there have been 1086 confirmed human cases of WNV and 45 deaths in humans. There have been 3,453 cases of WNV in horses with 26 confirmed in Montana. There have also been 111 species of birds that have been affected by WNV in the United States.

Certain diseases, referred to as reportable diseases, must be reported to the State Veterinarian and/or the to the United States Department of Agriculture's Area Veterinarian in Charge. Introduction of reportable diseases into Montana would jeopardize the state's disease-free status and result in high economic losses due to

reduced import and export of livestock. Montana currently has a disease-free status through the USDA for brucellosis, tuberculosis, *Salmonella pullorum-typhoid*, and pseudorabies. In some cases, diagnostic tests used to detect reportable diseases in domestic livestock may not be validated to detect the same diseases in exotic animals. The disease could enter the state undetected and be transmitted to domestic livestock or wildlife. In other cases, exotic species are not tested for other non-reportable diseases prior to authorization for entry. For example, in March 2000 the United States Department of Agriculture (USDA) issued an emergency ban on importation and interstate commerce of three species of African tortoise known to carry species of ticks that harbor bacterial agent of heartwater disease. If heartwater, a degenerative wasting disease of ruminants, were to become established in the United States, the USDA estimates that mortality rates of affected livestock (cattle, sheep, goats) and wildlife (deer, bison, antelope) could be expected to reach between 40 and 100 percent.

#### Threat of Hybridization with Other Species

Many exotic species are closely related to and can hybridize with Montana's native wildlife species or resident domesticated species. Examples of animals with hybridization potential that have already been prohibited for import into Montana include European red deer, mouflon sheep, and wild boars.

European red deer were imported into Montana in the early 1990's by alternative livestock ranches. Red deer readily hybridize with Rocky Mountain elk. Although the effects of this hybridization are unknown, the potential alteration of the gene pool of native elk is of concern. Because escapes of animals from alternative livestock ranches do occur, and because red deer or their hybrids are present on some Montana's alternative livestock ranches, a mandatory testing program has recently been completed by the alternative livestock operators. The operators, assisting in the effort to rid the industry of red deer and their hybrids, were required to test all animals on their facilities by January 1, 2000 at their own expense. They were then required to test all 2000 and 2001 calves. Although the test used to detect red deer hybrids assays for only two genetic "markers", this program has aided in eliminating most detectable red deer hybrids from the industry.

Texas offers an example illustrating the effects of hybridization resulting from the state's regulations concerning exotic species. In a book titled "Exotic on the Range" by Elizabeth Cary Mungall and William J. Sheffield, the authors describe hybridization problems that have affected state's livestock industry and the exotics industry itself. Mouflon sheep were first imported into Texas in 1946. Soon, mouflon sheep had hybridized with other breeds of sheep. Hybridization with wool producing sheep resulted in a spectrum of hair colors and wool types. However, by 1979, mouflon numbers in Texas had declined considerably due to the efforts of ranchers to remove this disruptive influence on their domestic production.

Mouflon sheep may also hybridize with the wild bighorn sheep populations. This potential along with the potential to hybridize with domestic sheep has resulted in Montana's prohibition for import or possession of mouflon sheep in Montana.

### Habitat Degradation/ Competition

An example of the degradation of habitat by an exotic species, resulting in the elimination of native species, is presented in the National Invasive Species Council's draft management plan. In October of 1986, three small clams were collected by a college biology class in the San Francisco Bay. They were identified as *Potamoecorbulata amurensis*, a species that had not previously been seen on the west coast. Nine months later, this species had become the most abundant clam in the northern part of the Bay, ultimately reaching densities of nearly 50,000 clams per square meter (Peterson, 1996). Other clams were displaced and the biodiversity of bottom-dwelling organisms was reduced (Nichols *et al.* 1990; Thompson, 1998). Also, because of the large numbers of clams and their capacity to filter the entire water column at least once a day, the phytoplankton present in the northern portion of the bay has been virtually eliminated. The phytoplankton are the base of the food chain, fed upon by zooplankton, which in turn are fed upon by juvenile fish. It is anticipated that the introduction of this clam may thus affect the whole San Francisco Bay ecosystem.

A similar situation involves discovery of the New Zealand mud snail in some of Montana's rivers. Native to New Zealand but long established in Australia and Europe, this species was discovered in North America in 1987 in the Snake River in south-central Idaho. Population levels can exceed 100,000 snails per square meter (NCSE, 1999). New Zealand mud snails (NZMS) have become established in every major river drainage in Yellowstone National Park, in the Madison River Drainage in Montana, at several other locations in the western U.S., and in Lake Ontario, New York. Modes of transportation may include hitchhiking on recreational equipment and other equipment used in water, in the intestinal tracts of harvested or illegally transported fish, or via transport on waterfowl and other aquatic birds. NZMS degrade habitat due to their high reproductive capacity and the subsequent impacts on invertebrate food sources. Effects on native aquatic invertebrates are being documented in the Madison River and in Darlington Ditch, a small stream along the lower Madison River. Fish receive little, if any, nutritive value from eating the snail. The snail has an operculum that it closes when threatened, which prevents digestive juices from reaching the soft tissue of the snail's body when ingested by fish.

Another example of habitat destruction by an exotic import already found in Montana is the nutria. One of Montana's few known aquatic nonindigenous mammals is the nutria, *Myocastor coypus*, a semi-aquatic animal that looks like a beaver with a rat-like tail. Nutria are found in and around fresh and saltwater ponds and swamps where they feed on vegetation and mollusks and burrow into the banks of canals and waterways. Nutrias were initially introduced into North America to be farmed for their fur. Since their introduction, some animals have escaped or been released from these farms due to a

decline in fur prices and have established localized breeding populations from Texas to Virginia and in the Great Lakes area. Presently, they are considered to be a pest species because they disrupt irrigation systems and destroy native aquatic vegetation and crops. Additionally, by disturbing the balance of native biota they provide an advantage for non-native plant species to become established.

The above species represent only a few known examples where introduction of non-native species, either intentionally or unintentionally, has caused problems in the ecosystem. There is potential for importation of additional non-native species into Montana that could impact native populations. There are many additional examples in the United States of both terrestrial and aquatic species that have affected habitat and caused the decline or elimination of native species in large areas of the landscape.

### Predation on Native Species

Exotic species introduced into new areas may be able to establish new populations. In the case of predatory species, prey in these new areas may not have the necessary defenses against the new predator while the predator itself may not be preyed upon in its new location. An example would be the brown tree snake and the devastation that it has caused to Guam's bird populations since its introduction, possibly on U.S. cargo ships during WWII.

Shortly after World War II, and before 1952, the brown tree snake was accidentally transported from its native range in the South Pacific to Guam, possibly as a stowaway in ship cargo. As a result of very abundant prey resources on Guam and in the absence of natural predators and other population controls, brown tree snake populations reached unprecedented numbers. Snakes caused the extirpation of most of Guam's native forest vertebrate species. Beginning in the mid 1960s, the brown tree snake decimated Guam's native avifauna. The birds of Guam evolved in the absence of snake predators. They had no experience with such a predator and lacked protective behaviors against the brown tree snake. Consequently, they were easy prey for these efficient, nocturnal predators. As the snakes spread across the island, the number of snakes began to grow exponentially and bird populations declined. Nine of the 11 species of native forest-dwelling birds have been extirpated from Guam. Two of these species, the Guam rail and the Micronesian kingfisher, are being bred in captivity in zoos in the hope that they can eventually be released back into the wild. Several other native species exist in precariously small numbers, and their future on Guam is perilous. Since Guam is a major transportation hub in the Pacific, numerous opportunities exist for the brown tree snakes on Guam to be introduced accidentally to other Pacific islands as passive stowaways in ship and air traffic from Guam. Numerous sightings of this species have been reported on other islands as well as in Texas, and an incipient population may be established on Saipan.

A secondary predation concern is the possibility that owners of large predators may resort to wildlife poaching in order to feed their animals. It costs an estimated \$3,600

to feed a tiger commercial large cat food for a month. In the absence of donated spoiled meat or road-kill deer, the average owner of a large predator may view poaching as an economically feasible way to keep their animals fed.

### Costs to City, County, and State Governments

City, county and state governments may incur substantial costs in responding to complaints and in mounting emergency responses to escapes of dangerous exotic pets. In addition, emergency responses to attacks on humans are becoming more common resulting in the need for training of first responders to deal with human attacks by dangerous exotic pets. For example, a recent fatal snake incident in Aurora, Colorado, illustrated the need for police and rescue personnel to be properly trained in snake identification and handling. Colorado Reptile Rescue and the Humane Society are joining forces to present training for first responders. Police, firefighters, animal control officers and paramedics will learn about reptile identification (for example, the difference between an iguana that looks more fierce than it is, and a water monitor lizard, which is a carnivore that can bite; the difference between a usually docile Burmese python and a more aggressive reticulated python) and how to safely and effectively intervene to rescue a human victim.

The costs of housing and feeding confiscated animals pending prosecution of the owners is also a cost that many times falls on the prosecuting agency. Depending on the species of animal, it may sometimes be difficult to identify an appropriate holding facility with proper permits. In addition, direct prosecution costs are also absorbed by city, county, or state governments. In many cases, it is the animal that suffers most in these situations. Placement of animals in appropriate facilities is impossible in some cases with the only alternative being euthanasia.

A concern that has arisen in many states following human injury or death is state liability for allowing importation/possession of dangerous exotic wildlife species. The growing popularity of tigers as pets has prompted efforts by states to draft laws regulating ownership of dangerous exotic animals, and legal battles over what constitutes lawful ownership.

Finally, the costs of eradication of an exotic species that has established itself in a new environment may be significant and require time and resources of many branches of government. As an example, the United States and Canada are spending over \$14 million a year to control the sea lamprey. Sea lampreys, which are native to the North Atlantic, are established in the Great Lakes. They have decimated lake trout populations through their feeding method which is to attach to fish and extract their body fluids.



## EXISTING MONTANA LAWS

### Montana Department of Fish, Wildlife & Parks

#### **Importation, Introduction, and Transplantation of Wildlife**

Montana Code Annotated (MCA) 87-5-701 – 87-5-721, and Administrative Rules of Montana (ARM) 12-9-401 – 12.9.402

*Synopsis:* Provides for the control of the importation for introduction and the transplantation or introduction of wildlife in the state. Importation of wildlife is prohibited unless the commission (FWP) determines that the species of wildlife poses no threat of harm to native wildlife and plants or to agricultural production and that the transplantation has significant public benefits. If the transplantation involves a fish species, an EA is required. Also authorizes the commission, after scientific investigation and public hearing, to prohibit importation for captive breeding for research or commercial purposes or for the pet trade any species that would not be readily subject to control by man while in captivity or that if released into natural habitat would pose a substantial threat to native wildlife and plants or agricultural production. FWP is to consult with the departments of Livestock and Agriculture on matters relating to the control of wildlife that may have a harmful effect on agricultural production or livestock operations. To supplement the transplantation laws, ARM 12.6.402 interprets “natural habitat” to apply to those habitats where a species proposed for location does not currently exist.

#### **Alternative Livestock Ranches**

MCA 87-4-401-87-4-433, and ARM 12.6.1501 – 12.6.1544

*Synopsis:* Defines alternative livestock as a privately owned caribou, white-tailed deer, mule deer, elk, moose, antelope, mountain sheep, or mountain goat indigenous to Montana, a privately owned reindeer, or any other cloven-hoofed ungulate as classified by the department. Cloven-hoofed ungulates are defined as an animal of the order Artiodactyla except a member of the families suidae, camelidae, or hippopotomidae. The term also does not include domestic pigs, cows, yaks, sheep, goats, or bison. The ARM further define alternative livestock to include all cloven-hoofed ungulates except domestic water buffalo. Alternative livestock may be kept only on a licensed alternative livestock ranch. The laws allow an applicant to request addition of a cloven-hoofed ungulate to the accepted list of alternative livestock by petitioning the department to initiate a rulemaking proceeding and providing information required to evaluate the potential threat the species may pose to native wildlife or livestock through nonspecific genetic dilution, habitat degradation or competition caused by feral populations of escaped animals, and the introduction of parasites or diseases. The ARM define a list of prohibited species including:

- (a) In the family Bovidae, all members of the following genera and hybrids thereof:
  - (i) Subfamily Caprinae:
    - (A) Rudicapra (chamois);
    - (B) Hemitragus (tahr);
    - (C) Capra (goats, ibexes--except domestic goat, *Capra hircus*);

- (D) Ammotragus (Barbary sheep or Aoudad); and
  - (E) Ovis (only the mouflon species, *Ovis musimon*);
- (ii) Subfamily Hippotraginae:
  - (A) Oryx (oryx and gemsbok); and
  - (B) Addax (addax);
- (iii) Subfamily Reduncinae:
  - (A) Redunca (reedbucks);
- (b) In the family Cervidae, all of the following species and hybrids thereof:
  - (i) Red deer (*Cervus elaphus elaphus*);
  - (ii) Axis deer (*Axis axis*);
  - (iii) Rusa deer (*Cervus timorensis*);
  - (iv) Sambar deer (*Cervus unicolor*);
  - (v) Sika deer (); and
  - (vi) Roe deer (*Cervus nippon*, *Capreolus capreolus* and *Capreolus pygargus*);
- (c) All wild species in the family Suidae (Russian boar, European boar) and hybrids thereof;
- (d) In the family Tayassuidae, the collared peccary (javelina) (*Tayassu tajacu*) and hybrids thereof

Montana statutes do provide some protection against the introduction of exotic species but there are also areas of concern. There is a statute that makes it illegal to release wildlife to the wild without authorization of the FWP Commission (87-3-105 MCA). Its limitations are that it pertains to intentional releases rather than to escapes and, of course, it is limited in that it doesn't address the more basic issue of importation. Montana's alternative livestock statutes (87-4-401 through 87-4-405) prohibit the importation of a number of invasive exotics (aoudad, mouflon and wild boar). Montana also has statutes and regulations that apply to importation of exotic wildlife and domestic livestock. However, it is important to point out that the Department of Livestock requirement that imported animals have health certificates pertains only to the health of the individual animal and does not prohibit importation of a deleterious species. Montana also has a statute (MCA 50-23-102) that bans possession of skunks, raccoons, bats and foxes for the purpose of minimizing human exposure to rabies. However, Montana does not have statutes that protect from importation of some other potentially harmful mammals, reptiles or amphibians that might be imported as pets or for commercial purposes.

## **Montana Department of Livestock**

### **General Disease Control Provisions**

MCA 81-2-102 through 81-2-104, 81-2-112 and ARM 32.3.103 through 32.3.116

*Synopsis:* Provides authority to the Department of Livestock to quarantine livestock and/or premises that in the judgment of the department may be infected or contaminated with an infectious, contagious, communicable or dangerous disease or disease-carrying

medium. Allows the department to prescribe treatments and enforce sanitary rules that are necessary and proper to circumscribe, extirpate, control, or prevent disease. Gives authority to adopt rules and orders considered necessary to prevent the introduction or spread of infectious, contagious, communicable, or dangerous diseases affecting livestock and alternative livestock in the state. Also, to adopt rules and orders necessary for the inspection, testing and quarantine of any subject animals. Allows for the inspection of all animals passing through Montana and, upon detection or suspicion of any quarantinable disease, for taking possession of, treating or disposing of animals.

### **Importation of Animals into Montana**

MCA 81-2-102, 81-2-702 through 81-2-706 and ARM 32.3.201 through 32.3.210, and 32.3.215

#### **81-2-702 Definitions**

- (c) “Livestock” means cattle, horses, mules, asses, sheep, llamas, alpacas, bison swine, ostriches, rheas, emus, goats, alternative livestock as defined in 87-4-406, and other animals for purposes of disease prevention control, and eradication.
- (d) “Animals” means livestock, dogs, cats, rabbits, rodents, game animals, fur-bearing and wild animals, and poultry and other birds.”
- (e) “Poultry” means domesticated birds including, but not limited to, chickens, turkeys, ducks, geese, guinea fowl, pigeons, and pheasants.”
- (f) “Health certificate” means a legible record written on an official health certificate form of the state of origin or an equivalent form of the U.S. department of agriculture attesting that the animals described thereon have been visually inspected and found to meet the entry requirements of the state of Montana.
- (g) “Permit” means an official document issued by the Montana Department of Livestock after proper application which allows the movement of animals, or biologics, into Montana.

*Synopsis:* Requires that all animals and poultry transported or moved into the state of Montana must be accompanied by an official health certificate or a permit, or both. States that game, fur-bearing and wild animals under domestication or in custody may enter the state of Montana if all applicable fish and game laws are complied with and a permit is obtained from the state veterinarian prior to the movement of such animals into the state. Allows the state veterinarian to require tests for specific diseases at his or her discretion. Authorizes the Department of Livestock to quarantine animals entering the state without a valid health certificate or permit (or both if required) or if violations of any rules of the department have occurred. Quarantine is at the risk and expense of the owner. **MCA 81-2-706 Consignment requirements.** 1) All animals brought into Montana, other than transitory cargo, must be consigned to or in the care of a person, entity, or authorized agent of either located in Montana. 2) The person, entity or authorized must notify the department of its intent to receive any animals and Consignee is responsible for acquiring all required permits and ensuring that they are accompanied by all required health certificates. 3) States that animals may not be diverted to a destination or consignee other than that stated on the health certificate or permit without first obtaining written permission from the state veterinarian. **ARM 32.3.211** Requires transporters (owners and operators) to assure themselves that each consignment or

shipment of animals into, within, or through the state of Montana is in conformity with applicable statutes and regulations, and that each consignment is accompanied by an official health certificate and/or permit.

#### **Restricted or Prohibited Game Farm Animals**

MCA 87-4-407, 87-4-422 and 87-4-424 and ARM 32.4.501 and 32.4.502

**Synopsis:** Gives authority to Department of Fish, Wildlife, and Parks to prohibit the possession, purchase, sale or transportation of elk-red deer hybrids. Designates the following game farm animals as “restricted species” based on specific animal health risks to wildlife and/or domestic livestock. These include white-tailed deer (*Odocoileus virginianus*), moose (*Alces alces*), and reindeer (*Rangifer* sp.). Restricts importation of wild or captive elk, mule deer and whitetail deer from geographic areas or game farms where chronic wasting disease is endemic or has been diagnosed. Prohibits the importation of wildebeests (*Connochaetes*), hartebeests (*Alcelaphus*), and sassabies, blesboks, bonteboks, topis (*Damaliscus*) and any hybrids thereof. Authorizes the department to restrict for game farming the importation of any cloven-hoofed ungulate species or subspecies and their hybrids with native species that have been classified by the Department of Fish, Wildlife, and Parks as posing a threat to native wildlife or livestock. Reclassification of any restricted or prohibited species must be based upon compelling scientific information. All wild species of cloven-hoofed ungulates brought into the state must be tested for tuberculosis and brucellosis.

#### **Management of Bison for Disease Control**

MCA 81-2-120 and ARM 32.3.224 and 32.3.224

**Synopsis:** Outlines specific testing requirements of imported bison for tuberculosis and brucellosis. Details the management plan for removal of wild, publicly owned bison which may be exposed to or affected with brucellosis, and enter Montana on private or public lands.

### **Montana Department of Agriculture**

#### **Montana Apiculture Act**

MCA 80-6-101 – 80-6-1115, and ARM 4.12.101 – 4.12.111

**Synopsis:** Specifically lists the African honeybee as a pest. Requires that all apiaries are registered. Allows the department to quarantine apiaries to prevent the entry or spread of diseases or pests associated with bees. Allows the department to enter into agreements with USDA and other federal agencies, other states, local government authorities and with individual beekeepers. Specifies conditions under which bees may be transported or brought into Montana. Does NOT provide any specific authority to regulate import of exotic animal species. Does provide for regulation of “pests”, e.g., African honeybees.

### **Montana Alfalfa Leafcutting Bees Act**

MCA 80-6-1101 through 80-6-1115, and ARM 4.12.1220 through 4.12.1230

*Synopsis:* Allows authority to control or prohibit import of non-native bee species. Allows the department to enter into agreements. Specifies authority to regulate entry of bees into quarantine areas. Defines the condition and manner in which bees may be imported into Montana. Identifies pathogens and parasites of alfalfa leafcutting bees. Generally allows the department authority to regulate and control the importation of bees into and within Montana.

### **Disease, Pest and Weed Control Act**

MCA 80-7-101 through 80-7-135, and ARM 4.12.1401 through 4.12.1432

*Synopsis:* Defines plant pest to include insects and other organisms injurious to plants or products of plants. Makes it unlawful to offer for sale, or to ship, sell or deliver infested or infected nursery stock, which is dangerous to horticultural interests of the state. Identifies San Jose scale, Putman scale, oyster shell scale, codling moth and insects that may vector Pear Blight as pests. Allows the department to establish and enforce quarantines. Generally allows for the control of (import) horticulturally injurious pests into and within the state. Does NOT provide any specific authority to regulate import of exotic animal species that are not designated as pests.

### **Montana Insect Control Act**

MCA 80-7-501 through 80-7-508

*Synopsis:* Defines insect pests. Generally allows the department to control insect pest infestations. “Control” may broadly be interpreted to include authority over importation of known and identified pests but does NOT provide any specific authority to regulate import of exotic animal species.

### **Montana Quarantine and Pest Management Act**

MCA 80-7-402 through 80-7-404

*Synopsis:* Allows the department to prevent the introduction and spread of plant pests and biological control agents in Montana through investigations and quarantines. Generally provides broad authority to control the import and transport of plant pests into and within Montana. Does NOT provide any specific authority to regulate import of exotic animal species not designated as a plant pest.

### **Vertebrate Pest Management Act**

MCA 80-7-1101 through 80-7-1107

*Synopsis:* Allows the department authority to manage vertebrate pest populations. Identifies vertebrate pest animals. Allows the department to enter into agreements. Defines management of vertebrate pests. If very broadly interpreted, *may* imply authority to exercise importation control over vertebrate pests through the use of the term “prevent”. Does NOT provide any specific authority to regulate import of exotic animal species not designated as vertebrate pests.



## REGULATIONS IN OTHER STATES

The existing laws regulating the import and possession of exotic species vary from state to state as to the type of regulation imposed, which is either a prohibition, a license, or no regulation. In addition the laws vary on the specific animals regulated. Thirty-four states have some form of law governing this issue and sixteen states have nothing.

- 12 states have a ban on private possession of almost all exotic animals - at least large cats (some of them ban all wild cats), wolves, bears, reptiles, most non-human primates:

AK, CA, CO, GA, HI, MA, NH, NM, TN, UT, VT, WY

- 7 states have a partial ban on private possession of exotic animals - allows ownership of some exotic animals but precludes others:

CT, FL, IL, MD, MI, NE, VA

- 15 states require the possessor of certain exotic animals to obtain a license or permit from the relevant state agency to privately possess the animal (excludes states only requiring import permits):

AZ, DE, IN, ME, MS, MT, NJ, NY, ND, OK, OR, PA, RI, SD, TX

- 16 states that have no license or permit requirements, but may regulate some aspect thereof (entry permit, veterinary certificate) or have no state statute governing this issue:

AL, AR, IA, ID, KS, KY, LA, MN, MO, NV, NC, OH, SC, WA, WV, WI

For the past three U.S. legislative sessions (2000, 2001, 2002), there has been an increase in introduced legislation relating to exotic wild animals. Many bills seek to prohibit and regulate private possession of exotic wild animals. A table summarizing the laws in all 50 states can be found at the following website maintained by the Animal Protection Institute: [api4animals.org/doc.asp?ID=372](http://api4animals.org/doc.asp?ID=372)

The following table contains information concerning state laws and prohibited species in states neighboring Montana.

## COLORADO LAWS

Colorado Wildlife Law generally prohibits the importation, live possession, sale, barter, trade, or purchase of any species of wildlife native to Colorado. In addition, these same laws restrict or prohibit the importation and possession of exotic (non-native) wildlife and noncommercial (pet) possession of regulated mammals.

Individuals can possess up to 4 total from a list of 16 native reptiles for personal use. Other permits allow for the possession of live wildlife under a Scientific Collection permit, wildlife rehabilitation, falconry and hawking, aquaculture, bait dealers, or wildlife park licenses. In addition, snapping turtles may be possessed by any person.

Colorado has a list of "unregulated wildlife" which includes all marine animals, 9 species of mammals, all tropical and subtropical fishes, all tropical and subtropical birds in the order *Passeriformes*, all non-native tropical and sub tropical species of snakes in 6 families, all non-native and subtropical lizards in the suborder *Sauria*, all non-native tropical and sub tropical species of turtles in 5 families, all non native tropical and subtropical species of frogs and toads in 15 families; order *Gymnophiona* (caecilians, tropical amphibians; order *urodela* (salamanders and newts; suborder *amphisbaenia* (work lizards); caimans; tiger salamanders; leopard frogs; members of the subfamily *phaisianae* not native to North America except chukar partridge, grey partridge, red-legged partridge; and ring-necked pheasants; those species of ducks, geese, and swans not listed in the regulations of USFWS 50 CFR 10.13.

## COLORADO PROHIBITED SPECIES

**Aquatic Species:** Piranha (including members of the genera *Serrasalmus*, *Roosevelthiella*, and *Pyrogecentrus*, *Trahira* (*Hopilas malabaricus*), Snakeheads or murrels (members of the genera *Channa* and *Ophicephalus*), Sticklebacks (members of the genera *Apeltes*, *Aulorhynchus*, and *Pungitius*), Talapia (all species), Grass Carp (white amur, black amur, and hybrid amur), Big Head Carp, Silver Carp, Indian Carp, Gars, Bowfins, Walking Catfish, Rudd, Green frog, Zebra Mussels, Quagga mussel, and Rusty Crayfish.

**Terrestrial Wildlife Species:** All species and hybrids of wild species in the subfamily *Caprinae*; Oryx and Addax genera; the following genera in the subfamily *Alcelaphinae*: Wildebeest (*Connochaetes*), Hartebeest (*Alcelphus*), Damaliscus sp. and Blesbok sp.; white-tailed deer; all species and hybrids of wild species in the family *Suidae* (European Boar, Eurasian boar, Russian boar, wild hog) and the family *Tayassuidae* (Javelina and peccary); Red deer and hybrids of elk; raccoon; nonnative species of the subfamily *Tetraoninae*, including but not limited to red grouse, black grouse, and Capercaillae; striped skunks, hedgehogs (except *Erinaceus albiventris*, *Hemiechinus spp.* and *paraechinus spp.*); bush-tailed opossums; monk parakeet.

NORTH DAKOTA LAWS	NORTH DAKOTA PROHIBITED SPECIES
<p>The state defines "Nontraditional livestock" as any wildlife held in a cage, fence, enclosure, or other manmade means of confinement that limits its movement within definite boundaries, or an animal that is physically altered to limit movement and facilitate capture, and categorizes them as follows:</p> <p>Category 1: Those animals that are similar to but have not been included as domestic species, including turkeys, geese, ducks (morphologically distinguishable from wild turkeys, geese, ducks), pigeons, and mules or donkeys. (These animals are subject to the rules of domestic animals.)</p> <p>Category 2: Those species that have been domesticated, including ostrich, emu, chinchilla, guinea fowl, ferret, ranch foxes, ranch mink, peafowl, all pheasants not in category 3, quail, chukar, and Russian lynx. Category 2 species imported must meet the health requirements as set forth in this chapter.</p> <p>Category 3: Those species that are indistinguishable from wild, indigenous species or present a health risk to wild and domestic species, or both, including elk, deer (except those listed under subdivisions a and b of subsection 3 of section 48-12-01-03), reindeer, bighorn sheep, fallow deer, ring-necked pheasant, Bohemian pheasant, sichuan pheasant, Canadian lynx, bobcat, and raptor.</p> <p>Category 4: Those species that are considered inherently or environmentally dangerous, including bears, wolves, wolf hybrids, primates, lions, tigers, and cats (not listed previously).</p> <p>Category 5: Those species that are not categorized in categories 1 through 4 require a special license, the requirements of which will be established by the board.</p> <p>Category 3, 4, or 5 of nontraditional livestock may be possessed in the state after obtaining an import permit; a nontraditional livestock license; a certificate from a veterinarian. Category 4 is those species that are considered inherently dangerous, including bears, wolves, wolf hybrids, primates, all non-domesticated cats except Canadian lynx, and bobcat.</p> <p>The board defines and lists species, hybrids, or viable gametes (ova or semen) are detrimental to existing animals and their habitat through parasites, disease, habitat degradation, or competition. Possession of the following species, hybrids, or viable gametes is restricted to a special license (applies to category 5).</p>	<p><b>Specifically restricted (special permits) animals:</b> (The species, hybrids thereof, or viable gametes are detrimental to existing animals and their habitat through parasites, disease, habitat degradation, or competition-applies to category 5)</p> <p>a. In the family bovidae, subfamily caprinae: chamois (<i>rupicapra</i>), tahr (<i>hemitragus</i>), goats. ibexes (<i>capra</i>), except domestic goat (<i>capra hircus</i>), barbary sheep or aoudad (<i>ammotragus</i>), mouflon species (<i>Ovis musimon</i>), subfamily hippotraginae: oryx and gemsbok (<i>oryx</i>), addax (<i>addax</i>), subfamily redinunae: reed bucks (<i>redunca</i>), subfamily alcelaphinae: wildebeests (<i>connochaetes</i>), hartebeests (<i>alcelaphus</i>), sassabees, blesbok, bontebok, topi (<i>damaliscus</i>), subfamily water buffalo (<i>bubalus</i>).</p> <p>b. In the family cervidae, all of the following species and hybrids: moose (<i>Alces alces</i>), axis deer (<i>Axis axis</i>), rusa deer (<i>Cervus timorensis</i>), sambar deer (<i>Cervus unicolor</i>), sika deer (<i>Cervus nippon</i>), roe deer (<i>Capreolus capreolus</i> and <i>Capreolus pygargus</i>), red deer (<i>Cervus elaphus</i>).</p> <p>c. All wild species of the family suidae (Russian boar, European boar) and hybrids.</p> <p>d. In the family tayassuidae: the collared peccary or javelina (<i>Tayassu tajacu</i>) and hybrids.</p>

## SOUTH DAKOTA LAWS

The state defines and lists nondomestic animals. A permit from the Board of Animal Industry is required to possess any of the listed nondomestic mammal, or any hybrids thereof.

In addition, all animals (including those specifically listed and non-human primates and reptiles) must be examined by a veterinarian and be free of any contagious, infectious, epidemic, or communicable disease.

A person possessing before December 31, 1993, a nondomestic mammal listed in this section may not translocate, purchase additions, or market the mammal within South Dakota. A person possessing such a mammal must quarantine the mammal and must obtain a grandfather permit until the mammal is disposed of.

The state lists specifically prohibited nondomestic mammals, however, zoos may be permitted to possess.

The state lists specified nondomestic mammals as restricted geographically to the area of South Dakota east of the Missouri River.

The Board of Animal Industry defines and issues the following permits:

- (1) Entry permit (no fee) -- a permit allowing importation of captive nondomestic animals into South Dakota which may be granted by telephone;
- (2) Temporary permit (\$10) -- a permit issued to an individual to possess for not more than 14 days a captive nondomestic mammal specifically prohibited in § 12:68:18:03.01 or restricted in § 12:68:18:03.02;
- (3) Grandfather permit (\$10 an animal to a maximum of \$100) -- a permit issued to an individual who possesses before December 31, 1993, mammals prohibited in § 12:68:18:03.01 or restricted in § 12:68:18:03.02;
- (4) Dealer auction permit (\$100) -- an annual permit issued to an individual or a group solely for the purpose of brokering, leasing, purchasing, or selling mammals listed in this chapter whether or not a fee or other compensation is charged for such services;
- (5) Possession permit (\$10 an animal to a maximum of \$100) -- a permit issued for the possession of mammals listed in this chapter for any reason other than the conditions described in subdivisions (2), (3), and (4) of this section;
- (6) Zoo permit (\$10 an animal to a maximum of \$100) -- a permit issued to nonprofit exhibitors of nondomestic mammals. A zoo permit allows the possession of any class of nondomestic mammals. The board may approve the permit if it determines that facilities are adequate for confinement.
- (7) Captive nondomestic animals permit.

## SOUTH DAKOTA PROHIBITED SPECIES

12:68:18:03.01. **Specifically prohibited nondomestic mammals:**

- (1) Of the family Suidae, all nondomestic members; and
- (2) Of the family Canidae, genus Nyctereutes, species procyonoides (raccoon dog).

12:68:18:03. **Specifically permitted nondomestic animals for possession::**

- (1) Of the order Carnivora, all nondomestic members of the following families:
  - (a) Felidae;
  - (b) Canidae;
  - (c) Ursidae;
  - (d) Mustelidae; and
  - (e) Hyaenidae;
- (2) Of the order Artiodactyla, all nondomestic members;
- (3) Of the order Perissodactyla, all nondomestic members of the following families:
  - (a) Tapiridae; and
  - (b) Rhinocerotidae; and
- (4) Of the order Proboscidea, all members of the following families:
  - (a) African elephant; and
  - (b) Asian elephant.

12:68:18:03.02. **Specifically restricted nondomestic mammals** (Possession is restricted geographically to the area of South Dakota east of the Missouri River):

- (1) Nondomestic mammals that are capable of crossbreeding with free-roaming wild elk, specifically including all red deer, sika deer, sambar, Pe're Davids deer, and axis deer and any of their hybrids; and
- (2) Nondomestic mammals that are capable of crossbreeding with free-roaming wild sheep and goats or competing aggressively for habitat utilized by wild sheep and goats, specifically including all mouflon, argali, urial, blue sheep, auodad, barbary sheep, and any of their hybrids. A person may not confine or allow the confinement of free-roaming wildlife.

## WYOMING LAWS

The state defines and specifically lists domestic animals as well as domesticated animals. These animals may be possessed and imported subject to Wyoming Livestock Board import requirements.

The state defines wild and wildlife, as well as big or trophy game animals. It is unlawful for persons to possess big or trophy game animals. The state specifically lists those species defined as big game animals or trophy game animals.

A permit from the Game and Fish Department is required prior to importation, possession, confinement, and/or transportation of any living wildlife.

According to WY Fish and Game, it is unlawful to possess all other exotic animals such as, tigers, lions, primates, wolves, bears, etc.

## WYOMING PROHIBITED SPECIES

The following wildlife may be possessed if captured in WY, but are prohibited from importation:

1) Wolves (*Canis lupus*), wolf hybrids, and/or wolf/dog hybrids may not be imported or sold.

The following wildlife are prohibited from possession and importation:

pronghorn antelope, (*Antilocapra americana*), bighorn sheep, (*Ovis canadensis*),

mule deer, (*Odocoileus hemionus*),

white-tailed deer (*Odocoileus virginianus*),

elk (*Cervus elaphus nelsoni*),

moose (*Alces alces*),

mountain goat (*Oreamnos americanus*),

black bear (*Ursus americanus*),

grizzly bear (*Ursus arctos*),

mountain lion (*Felis concolor*),

All members of the family Suidae, except those exempt in Section 5(a)(ii) and Section 5 (b)(i)(F),

All members of the family Tayassuidae,

All members of the subfamily Alcelaphinae,

All members of the subfamily Caprinae, except those exempt in Section 5(a)(ii),

All members of the family Cervidae, except as provided for under Section 12 of this regulation,

Manitoba toad (*Bufo hemiophrys*),

Monk parakeet (*Myiopsitta monachus*),

Rusty crayfish (*Orconectes rusticus*),

Zebra mussel (*Dreissena polymorpha*),

New Zealand mudsnail (*Potamopyrgus antipodarum*),

Red Wolf (*Canis rufus*).



## REGULATORY APPROACHES/RECOMMENDATIONS

This report has provided numerous examples of the introduction of exotic wildlife species into new environments resulting in adverse environmental impacts. Of particular interest is whether the state of Montana is at risk for these deleterious introductions and, if so, what preventative measures can be taken.

Currently, the regulation of animal imports into Montana begins with the Department of Livestock (DoL). The DoL requires that all animals entering the state be accompanied by an official health certificate (certificate of veterinary inspection) and the shipper must acquire an import permit. If possession of a specific species of animal is restricted to permitted individuals or premises, authorization for an import permit must also be given by the Department of Fish, Wildlife & Parks (FWP) based on the destination of the animal within Montana. If possession is prohibited in Montana, an import permit will not be issued.

In preparing this document, the committee representing the four departments has identified the problems listed below and proposes the following statutory changes and recommendations.

### Illegal Imports

- Problem

Not all animals entering the state are entering legally because health certificates and import permits are not always obtained by the shipper as required. One area of concern identified by members of the committee was the inability to adequately monitor and enforce regulations pertaining to the import of exotic animals or pets. Pet stores are required to obtain health certificates and permits from the Department of Livestock prior to import of exotic pets. However, a review of the Department's records reveals that many pet stores across the state may not be complying with these requirements. For example, no permits for importation of reptiles or birds have been issued by the Department of Livestock to any of the Helena area pet stores within the last 3 years. These animals, available in local pet stores, may have been obtained in-state or imported illegally. In many cases, the Department of Livestock has no way of knowing the origin of the animals. Further, no one knows what other types of animals may have been imported to pet stores or individuals without proper authorization. Of greater concern is the number of animals that enter the state illegally through other channels. There is no way of knowing how many exotic animals are brought into the state illegally.

Although not an illegal import at this time, the import and possession of captive wolves or wolf hybrids in Montana is an area requiring further evaluation. Currently, captive wolves and wolf hybrids may be kept as pets and bred and/or sold without a permit. The only requirements for possession of wolves or wolf hybrids in Montana are that the animal be tattooed with a number registered by the Department of Fish, Wildlife & Parks.

All of the potential issues including public safety, competition with or predation on native species, as well as the issue of enforcement of existing tattoo laws are issues that need further study concerning the possession of wolves. Many states currently prohibit the possession of wolves or wolf hybrids while many others require a permit to possess those animals and have regulations in place regarding housing, care, and identification

- Recommendation

Education--Pet store owners, animal vendors, and the general public need to be better informed of the regulations and the rationale behind importation regulations. The public also needs to be educated as to potential problems and risks of ownership of some exotic pets. Exotic pet owners need to be informed of the possible consequences of irresponsible pet ownership—for example, if an unwanted pet is released into the wild.

“User friendly” permitting system.—A more “user friendly” system would encourage compliance by those involved. The user friendly system would tie in with issues discussed below such as a developed list of species for which import is allowed. Currently, requests for species not previously addressed results in phone calls between departments to determine if import should be allowed, and often insufficient information is available to make that determination quickly.

### **Unknown Species – Unknown Effects**

- Problem

Potentially, requests for importation could be received for over 4,000 species of mammals. If one adds species of reptiles, birds and amphibians to the list, the numbers quickly become unmanageable in terms of evaluating each species as to its potential threat to the environment and developing a list of species prohibited for import into Montana. Currently, only a handful of animal species have been prohibited for importation into Montana. There is concern regarding the ability of the current system to evaluate the potential threats the myriad of exotic species could pose to human health and safety, wildlife populations and habitats, or our agricultural and livestock industries. Many species native to tropical habitats would probably not survive if released into the wild in Montana. But many other species native to mountainous areas of other northern and southern latitudes probably could.

- Recommendation

Authorization to develop a review system and establish a “Classification Review Committee”. Oregon and Utah have recently developed systems for the control of exotic imports. It is recommended that a similar system be developed in Montana. Under that system, animal species are classified as prohibited, controlled, or non-controlled. The non-controlled list is extensive and includes most of the species traditionally sold or kept as pets. Controlled species include those species that may be

possessed but only under a permit issued by the state. A health certificate and an import permit would still be required for non-controlled and controlled species of animals entering the state. The prohibited list would include animals determined to pose a significant risk to the environment, the public, the wildlife, livestock, or other animals in Montana and for which import is not allowed. Species that have not been classified may not be imported into the state. If a specific non-native species is not classified, a person may request classification. That person must provide the Department of Fish, Wildlife and Parks with information illustrating that the requested action will not harm, nor has the potential to harm, the human environment including any native species or its habitat, or livestock or other agricultural enterprises. The information should be scientific in nature, in written form and include appropriate literature cited.

It is further recommended that requests for classification of animals be evaluated by a Classification Review Committee made up of representatives from the four departments involved with the preparation of this report. The Classification Review Committee would evaluate requests and make recommendations to the Fish, Wildlife & Parks Commission concerning classification of a non-native species. Classifications should be made based upon a decision tree concept that evaluates potential impacts from the importation of a non-native species. The decision tree used in Oregon to evaluate the threats of non-native species includes the following set of questions:

1. Is the species natural range and habitat similar to the Oregon climate and habitat?
2. Does the species have an invasive history?
3. Could the species survive in Oregon?
4. What is the potential for the species to prey on wildlife?
5. What is the potential for the species to degrade habitat?
6. What is the potential for the species to pass diseases or parasites?
7. What is the potential for the species to compete for food, water, and shelter with native animals?
8. What is the feasibility and cost of capturing or eradicating escaped animals?

The Classification Review Committee would also be instrumental in developing the initial prohibited, controlled, and non-controlled species lists. Much of the work concerning list development has already been completed by states such as Oregon, Utah, and Colorado and those lists would be used in the development of lists for Montana.

## Enforcement

- Problem

Enforcement of current laws concerning import of animals is inefficient and understaffed. Enforcement is reactive in that action is generally taken following

notification or investigation of an illegal animal importation. If the problem is an illegal introduction into the environment, the damage may already be done. If the problem requires confiscation of an animal, problems arise as to ownership, care, and disposition of the confiscated animal. Many individuals purchasing exotic animals or businesses shipping animals into the state are unaware of the laws in place concerning importation. Many are also unaware of the potential dangers that some exotic animal species may pose to the environment.

- Recommendation

Authorization – New regulations concerning the import of exotic animals must include authorization for confiscation of illegally imported animals. Along with the authority to seize those animals must come authorization to recover the costs of housing and caring for the animals until appropriate “homes” may be found or the final disposition of the animal is determined. An alternative may be bonding of the individual in possession of the illegally imported animal until it’s final disposition is determined.

Cooperation – As mentioned previously in this report, there may be many illegally imported animals entering Montana. Cooperative programs focusing on education are recommended with the Montana Highway Patrol, the Montana Department of Transportation, and the United States Department of Agriculture Animal and Plant Health Inspection Services. Those agencies are in a position to assist state enforcement divisions to ensure that non-native species entering Montana are in compliance with existing regulations.

### Coordination

- Problem

Current control efforts through the four departments involved with this report are generally fragmented and not well coordinated. Each department has its own responsibilities and its own regulations and policy, but communication between the departments as well as an understanding of laws that cross department lines is not always present.

- Recommendation

The exercise of preparing this report has already reaped benefits in communication between departments and in understanding of the laws in each of the departments. Cooperation between the various departments would be furthered with the development of a Classification Review Committee to review requests for classification of exotic species. The departments further recommend that Memorandums of Understanding (MOU) be developed to delineate the responsibilities of each department under the current system and those MOUs be updated as new regulations are developed to address

the import of exotic species. For example, an understanding of the respective responsibilities of the Animal and Plant Health Inspection Service and the Montana Department of Agriculture is needed with respect to the control of insect importation.

In identifying problems and making recommendations for Montana concerning the import of exotic animals, the committee made use of two excellent resources that the reader may want to review. The first is the "Model for State Regulations Pertaining to Captive Wild and Exotic Animals" which was prepared by the Southeastern Wildlife Disease Study at the College of Veterinary Medicine, University of Georgia, Athens, Georgia. The second was model legislation prepared by the Animal Protection Institute of Sacramento, California that is designed to protect the public against health and safety risks that exotic animals pose to the community and to protect the welfare of the individual animals held in private possession. Either of these documents may be obtained from members of the committee involved with the preparation of this document.



## APPENDIX A

### Executive Order 13112

Executive Order 13112 of February 3, 1999

#### Invasive Species

By the authority vested in me as President by the Constitution and the laws of the United States of America, including the National Environmental Policy Act of 1969, as amended (42 U.S.C. 4321 et seq.), Nonindigenous Aquatic Nuisance Prevention and Control Act of 1990, as amended (16 U.S.C. 4701 et seq.), Lacey Act, as amended (18 U.S.C. 42), Federal Plant Pest Act (7 U.S.C. 150aa et seq.), Federal Noxious Weed Act of 1974, as amended (7 U.S.C. 2801 et seq.), Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.), and other pertinent statutes, to prevent the introduction of invasive species and provide for their control and to minimize the economic, ecological, and human health impacts that invasive species cause, it is ordered as follows:

#### Section 1. *Definitions.*

- (a) "Alien species" means, with respect to a particular ecosystem, any species, including its seeds, eggs, spores, or other biological material capable of propagating that species, that is not native to that ecosystem.
- (b) "Control" means, as appropriate, eradicating, suppressing, reducing, or managing invasive species populations, preventing spread of invasive species from areas where they are present, and taking steps such as restoration of native species and habitats to reduce the effects of invasive species and to prevent further invasions. "
- (a) "Ecosystem" means the complex of a community of organisms and its environment.
- (b) (d) "Federal agency" means an executive department or agency, but does not include independent establishments as defined by 5 U.S.C. 104. (e) "Introduction" means the intentional or unintentional escape, release, dissemination, or placement of a species into an ecosystem as a result of human activity.
- (f) "Invasive species" means an alien species whose introduction does or is likely to cause economic or environmental harm or harm to human health.
- (g) "Native species" means, with respect to a particular ecosystem, a species that, other than as a result of an introduction, historically occurred or currently occurs in that ecosystem.
- (h) "Species" means a group of organisms all of which have a high degree of physical and genetic similarity, generally interbreed only among themselves, and show persistent differences from members of allied groups of organisms.
- (i) "Stakeholders" means, but is not limited to, State, tribal, and local government agencies, academic institutions, the scientific community, nongovernmental entities including environmental, agricultural, and conservation organizations, trade groups, commercial interests, and private landowners.
- (j) "United States" means the 50 States, the District of Columbia, Puerto Rico, Guam, and all possessions, territories, and the territorial sea of the United States.

**Sec. 2. *Federal Agency Duties.*** (a) Each Federal agency whose actions may affect the status of invasive species shall, to the extent practicable and permitted by law.

1) identify such actions;

2) subject to the availability of appropriations, and within Administration budgetary limits, use relevant programs and authorities to: (i) prevent the introduction of invasive species; (ii) detect and respond rapidly to and control populations of such species in a cost-effective and environmentally sound manner; (iii) monitor invasive species populations accurately and reliably; (iv) provide for restoration of native species and habitat conditions in ecosystems that have been invaded; (v) conduct research on invasive species and develop technologies to prevent introduction and provide for environmentally sound control of invasive species; and (vi) promote public education on invasive species and the means to address them; and  
3) not authorize, fund, or carry out actions that it believes are likely to cause or promote the introduction or spread of invasive species in the United States or elsewhere unless, pursuant to guidelines that it has prescribed, the agency has determined and made public its determination that the benefits of such actions clearly outweigh the potential harm caused by invasive species; and that all feasible and prudent measures to minimize risk of harm will be taken in conjunction with the actions.

- (b) Federal agencies shall pursue the duties set forth in this section in consultation with the Invasive Species Council, consistent with the Invasive Species Management Plan and in cooperation with stakeholders, as appropriate, and, as approved by the Department of State, when Federal agencies are working with international organizations and foreign nations.

**Sec. 3. *Invasive Species Council.*** (a) An Invasive Species Council (Council) is hereby established whose members shall include the Secretary of State, the Secretary of the Treasury, the Secretary of Defense, the Secretary of the Interior, the Secretary of Agriculture, the Secretary of Commerce, the Secretary of Transportation, and the Administrator of the Environmental Protection Agency. The Council shall be Co-Chaired by the Secretary of the Interior, the Secretary of Agriculture, and the Secretary of Commerce. The Council may invite additional Federal agency representatives to be members, including representatives from subcabinet bureaus or offices with significant responsibilities concerning invasive species, and may prescribe special procedures for their participation. The Secretary of the Interior shall, with concurrence of the Co-Chairs, appoint an Executive Director of the Council and shall provide the staff and administrative support for the Council.

- (b) The Secretary of the Interior shall establish an advisory committee under the Federal Advisory Committee Act, 5 U.S.C. App., to provide information and advice for consideration by the Council, and shall, after consultation with other members of the Council, appoint members of the advisory committee representing stakeholders. Among other things, the advisory committee shall recommend plans and actions at local, tribal, State, regional, and ecosystem-based levels to achieve the goals and objectives of the Management Plan in section 5 of this order. The advisory committee shall act in cooperation with stakeholders and existing organizations addressing invasive species. The Department of the Interior shall provide the administrative and financial support for the advisory committee.

**Sec. 4. *Duties of the Invasive Species Council.*** The Invasive Species Council shall provide national leadership regarding invasive species, and shall:

- (a) oversee the implementation of this order and see that the Federal agency activities concerning invasive species are coordinated, complementary, cost-efficient, and effective, relying to the extent feasible and appropriate on existing organizations addressing invasive species, such as the Aquatic Nuisance Species Task Force, the Federal Interagency Committee for the Management of Noxious and Exotic Weeds, and the Committee on Environment and Natural Resources;
- (b) encourage planning and action at local, tribal, State, regional, and ecosystem-based levels to achieve the goals and objectives of the Management Plan in section 5 of this order, in cooperation with stakeholders and existing organizations addressing invasive species;
- (c) develop recommendations for international cooperation in addressing invasive species; develop, in consultation with the Council on Environmental Quality, guidance to Federal agencies pursuant to the National Environmental Policy Act on prevention and control of invasive species, including the procurement, use, and maintenance of native species as they affect invasive species;
- (d) facilitate development of a coordinated network among Federal agencies to document, evaluate, and monitor impacts from invasive species on the economy, the environment, and human health;
- (e) facilitate establishment of a coordinated, up-to-date information-sharing system that utilizes, to the greatest extent practicable, the Internet; this system shall facilitate access to and exchange of information concerning invasive species, including, but not limited to, information on distribution and abundance of invasive species; life histories of such species and invasive characteristics; economic, environmental, and human health impacts; management techniques, and laws and programs for management, research, and public education; and
- (f) prepare and issue a national Invasive Species Management Plan set forth in section 5 of this order.

**Sec. 5. *Invasive Species Management Plan.*** (a) Within 18 months after issuance of this order, the Council shall prepare and issue the first edition of a National Invasive Species Management Plan (Management Plan), which shall detail and recommend performance-oriented goals and objectives and specific measures of success for Federal agency efforts concerning invasive species. The Management Plan shall recommend specific objectives and measures for carrying out each of the Federal agency duties established in section 2

- (a) of this order and shall set forth steps to be taken by the Council to carry out the duties assigned to it under section 4 of this order. The Management Plan shall be developed through a public process and in consultation with Federal agencies and stakeholders.
- (b) The first edition of the Management Plan shall include a review of existing and prospective approaches and authorities for preventing the introduction and spread of invasive species, including those for identifying pathways by which invasive species are introduced and for minimizing the risk of

introductions via those pathways, and shall identify research needs and recommend measures to minimize the risk that introductions will occur. Such recommended measures shall provide for a science-based process to evaluate risks associated with introduction and spread of invasive species and a coordinated and systematic risk-based process to identify, monitor, and interdict pathways that may be involved in the introduction of invasive species. If recommended measures are not authorized by current law, the Council shall develop and recommend to the President through its Co-Chairs legislative proposals for necessary changes in authority.

- (c) The Council shall update the Management Plan biennially and shall concurrently evaluate and report on success in achieving the goals and objectives set forth in the Management Plan. The Management Plan shall identify the personnel, other resources, and additional levels of coordination needed to achieve the Management Plan's identified goals and objectives, and the Council shall provide each edition of the Management Plan and each report on it to the Office of Management and Budget. Within 18 months after measures have been recommended by the Council in any edition of the Management Plan, each Federal agency whose action is required to implement such measures shall either take the action recommended or shall provide the Council with an explanation of why the action is not feasible. The Council shall assess the effectiveness of this order no less than once each 5 years after the order is issued and shall report to the Office of Management and Budget on whether the order should be revised.

**Sec. 6. *Judicial Review and Administration.*** (a) This order is intended only to improve the internal management of the executive branch and is not intended to create any right, benefit, or trust responsibility, substantive or procedural, enforceable at law or equity by a party against the United States, its agencies, its officers, or any other person.

(b) Executive Order 11987 of May 24, 1977, is hereby revoked.

(c) The requirements of this order do not affect the obligations of Federal agencies under 16 U.S.C. 4713 with respect to ballast water programs.

(d) The requirements of section 2(a)(3) of this order shall not apply to any action of the Department of State or Department of Defense if the Secretary of State or the Secretary of Defense finds that exemption from such requirements is necessary for foreign policy or national security reasons.

WILLIAM J. CLINTON  
THE WHITE HOUSE,  
*February 3, 1999.*



## APPENDIX B

# Western Governor's Association (WGA) Policy Resolution 02-21

## Undesirable Aquatic, Riparian, and Invasive Species

Annual Meeting  
June 23, 2002  
Phoenix, Arizona

SPONSOR: Governor Martz, Gutierrez, Knowles, Kempthorne, Geringer, and Owens

- **BACKGROUND**

1. Invasive or undesirable aquatic, riparian, and terrestrial species influence the productivity, value, and management of a broad range of land and water resources in the west. These undesirable species have significant negative economic, social and ecological impacts which include, but are not limited to:
  - a. reduction of yield and quality of desirable crop forage plants;
  - b. poisoning of livestock;
  - c. Reduction of native biodiversity resulting in a growing number of threatened, endangered and extinct species;
  - d. adverse affects upon human health through allergies, poisoning, and harboring vectors;
  - e. degradation of natural aquatic systems including obstruction of water flow in irrigation and drainage systems;
  - f. reduction of the value of streams, lakes, reservoirs, oceans, and estuaries for fish and wildlife habitat, public water supply;
  - g. high cost of control;
  - h. increase in facilities maintenance costs such as power-plants, water treatment plants, etc.;
  - i. detracting from the aesthetics and recreational value of wild lands, parklands, and other areas; and
  - j. decreased real estate property value and increased costs of property development;
  - k. competition with or transmission of diseases to wild Pacific salmon or other important marine and aquatic species.
2. Undesirable species are those listed on a state or federal recognized list of noxious, nuisance or deleterious species.

## GOVERNORS - POLICY STATEMENT

1. The Western Governors recognize that the spread of invasive, undesirable species results from the combination of human behavior, susceptibility of invaded environments, and the biology of the invading species, and that these characteristics are not indicated by geopolitical boundaries, but rather by ecosystem-level components, which often span state borders. The Western Governors support coordinated, multi-state, management and eradication actions preventing the spread, intentional and unintentional introductions, and control of undesirable aquatic and terrestrial species on land and in the water. The principal objectives will be to maintain properly functioning natural systems, agricultural productivity, enhancing resource and environmental protection, and the protection of human health. Control programs will be those that are economically practicable in relationship to the long-term impacts an introduced nuisance species will cause.
2. In pursuit of these objectives, programs for the control and/or eradication of undesirable aquatic and terrestrial species need to incorporate education, prevention, and early detection and rapid response techniques and be based upon Integrated Pest Management (IPM) concepts and practices. IPM involves the use of all suitable techniques, including biological, chemical, physical (mechanical and manual), cultural measures (environmental manipulation), and public awareness programs.
3. The western governors strongly encourage all natural resource land management agencies, local governments, universities and the private sector to collaborate and form partnerships to prevent new introductions, for the enhancement, development and implementation of IPM programs, and to work together to find creative new approaches for protecting and restoring natural and agricultural resources, including the use of challenge grants.
4. The Western Governors urge full funding support for federal programs that manage invasive species on federal lands and provide assistance to states in the management of invasive species, including the national invasive species act and programs at the U.S. Department of Agriculture Animal, Plant, and Health Inspection Service (APHIS) which provides valuable services in the detection and elimination of undesirable species of insects and plant diseases. Their services are essential for states relying on trade and export services to maintain strong trade and export functions.

## GOVERNORS - MANAGEMENT DIRECTIVE

1. The Western Governors direct WGA staff to transmit this resolution to the appropriate cabinet secretaries and congressional committees.
2. The Western Governors Association shall obtain necessary resources and work with appropriate partners to facilitate the development and coordination of western strategies to limit the spread of undesirable aquatic and terrestrial species. The executive director is authorized to obtain federal staff support under the Intergovernmental Personnel Act if necessary in connection with this directive.
3. Of particular importance will be:
  - a. Development and harmonization of uniform, and scientifically based species lists;
  - b. Establishing consistent and effective policies and procedures to prevent transport, sale and dispersal of undesirable species, particularly those under eradication in specific states;
  - c. Development of uniform public educational and awareness media that create effective communication to the public throughout the western states; and
  - d. Facilitation of development of appropriate K-12 school science curricula which recognizes that the introduction, spread and impacts of undesirable species present a serious environmental threat from a biological pollution@ and that engendering environmental stewardship is best accomplished with early education.

*This resolution was originally adopted in 1998 as WGA policy resolution 98-018.*

Approval of a WGA resolution requires an affirmative of two-thirds of the Board of Directors present at the meeting. Dissenting votes, if any, are indicated in the resolution. The Board of Directors is comprised of the governors of Alaska, American Samoa, Arizona, California, Colorado, Guam, Hawaii, Idaho, Kansas, Montana, Nevada, New Mexico, North Dakota, Northern Mariana Islands, Oregon, South Dakota, Texas, Utah, Washington, and Wyoming.

All policy resolutions are posted on the WGA Web site ([www.westgov.org](http://www.westgov.org)) or you may request a copy by writing or calling:

Western Governors Association  
1515 Cleveland Place, Suite 200  
Denver, CO 80202-5114

## APPENDIX C

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APPENDIX D  
SELECTED MEDIA REPORTS

Date: 6 Aug 2002  
From: Akira Goto <dolphin@mail.ne.jp / goto@ocol.com>  
Source: CDC website  
<<http://www.cdc.gov/od/oc/media/pressrel/r020806.htm>>

Tularemia Outbreak in Prairie Dogs in Texas  
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Officials from the Centers for Disease Control and Prevention (CDC) and the Texas Department of Health (TDH) are investigating an outbreak of tularemia in wild prairie dogs at a commercial facility in Texas distributing the animals in the United States and to other countries.

"These prairie dogs are sold as pets and anyone who has recently handled sick or dead prairie dogs from this facility may be at risk of acquiring tularemia," said CDC Epidemiologist Dr. David Dennis. "So far no human cases of tularemia associated with these prairie dogs have been identified. We're learning more about where these animals have been distributed but we know some sick animals were distributed here in the US and abroad. Anyone who has handled a sick or dead prairie dog in the last few weeks should contact their state or local health department or health care provider to learn if they should take antibiotics to prevent tularemia."

Texas health officials were recently notified a number of prairie dogs at the facility had died unexpectedly. Testing on the dead animals at CDC laboratories indicated the animals died from tularemia.

Officials went to the facility to investigate and learned over the past 2 months hundreds of prairie dogs potentially infected with the bacteria were shipped to a number of outlets in various states including Ohio, West Virginia, Florida, Washington, Mississippi, Nevada, Texas, Illinois, Virginia. In addition, prairie dogs were also shipped to Japan, Czech Republic, Netherlands, Belgium, Spain, Italy and Thailand. CDC and Texas health authorities have been notifying respective state and international health authorities. In addition, the World Health Organization (WHO) and the European Union Disease Surveillance Network are assisting with the investigation.

Persons can become infected with the bacteria causing tularemia by coming into skin contact with secretions from infected animals or through the bite or scratch of an infected animal. The disease usually begins suddenly with high fever, chills, head and muscle aches and a feeling of weakness. Chest discomfort and a dry cough are common. Other symptoms may appear depending on how someone acquires the infection.

For example, if the bacteria enter through a break in the skin of the right hand, an open sore will usually develop at the site of entry, and tender swollen glands may appear in the right arm. It normally takes 1 to 14 days for someone to become sick after they have been exposed to the bacteria. The disease cannot be spread person to person and it can be successfully treated with antibiotics if it is properly diagnosed.

About 200 cases of tularemia in humans are reported each year in the US, mostly in persons living in the south-central and western states. The disease is commonly known as "rabbit fever" and is usually acquired by handling wild rabbits or being bitten by infective ticks and certain flies, such as deer flies and horse flies.

For more information about tularemia go to:  
<<http://www.bt.cdc.gov/DocumentsApp/FAQTularemia.asp?link=3&page=bio>>

## Mudsnail, choker of rivers and lakes, appears in Oregon

08/28/02

JONATHAN BRINCKMAN

The tiny New Zealand mudsnail would seem harmless enough, a veritable vegan of the mollusk world: No larger than a BB, it grazes on algae and carries no poisons. But it does something very large and lethal: reproduces at an exponential rate, weaving "snail blankets" that smother river and lake bottoms, consuming food needed by trout and other fish.

Where it goes, death knocks. First detected in Idaho in 1987 and arriving by way of New Zealand or, possibly, Australia, the mudsnail is turning out to be a nightmare guest of the American West.

The first incursion was small, in scattered locations. But the mudsnail has since ruined some of the best trout streams of Yellowstone National Park and established three known footholds in Oregon: In the Columbia River at Young's Bay and Kalama and in the Snake River on the state's eastern border.

Scientists are now plain in their assessments: It's sure to invade Oregon.

"It will spread, that's guaranteed," said David Richards, a research ecologist at the University of Montana in Bozeman and one of the world's top mudsnail authorities. "All those famous trout streams in Oregon are ripe for the mudsnail."

Dizzying numbers make the case. The mudsnail needs no sex partner to reproduce, being a prodigious self-cloner. A lone snail is known to make up to 38 miniature versions of itself twice a year -- enough to account for 3.7 million offspring in two years.

Of course, each of those 3.7 million can do the same thing, spinning life-choking "mats" or "blankets" that show hundreds of thousands of individuals per square meter.

That's when a Yellowstone problem becomes an Oregon problem.

"Populations reach a certain level before they take off," said Tina Proctor, an aquatic nuisance coordinator with the U.S. Fish and Wildlife Service. "With mudsnails, that may just be happening now."

In New Zealand, three species of fish eat the mudsnail, keeping it in check. And if the fish don't get them, 14 varieties of New Zealand's trematodes, or parasitic worms, will.

But the ecosystems of the American West do not recognize the alien mudsnail and have no defense against it. Facing no predators, the critter enjoys a fat, easy life in which it consumes up to 50 percent or more of the food in a stream and starves out insects essential to trout, including stoneflies, caddisflies and mayflies.

It's not that Western U.S. fish haven't tried to fight back. But those bold enough to eat the mudsnail find only failure.

Here, too, the snail outwits the competition: It closes a tiny door, called an operculum, over the opening of its shell. Sealed from the ravages of digestion, the tiny snail passes through the fish.

"The snails are basically empty calories for fish," says Mark Sytsma, director of the Center for Lakes and Reservoirs at Portland State University. "Fish that eat New Zealand mudsnails grow up stunted."

Streams blanketed with mudsnails have a marked decrease in species diversity, a key measure used by ecologists to gauge the health of a waterway.

Particularly worrisome to Sytsma is the potential impact on spawning salmon, many runs of which are federally protected under the Endangered Species Act. Salmon eggs in gravel need oxygen, and, he said, a blanket of snails reduces that.

Fishers get involved Mudsnails are spread by the very people who like trout streams the most: fly fishers.

The snails get caught in fishing gear such as waders and nets. Unseen, they are transported to the next remote stream the ambitious fisher finds -- often pristine waterways in pristine wilderness where the mudsnail can multiply and maraud its way downstream.

Richards of Montana thinks fishermen are the most likely reason New Zealand mudsnails have been found in the Colorado River, the Green River of Wyoming and the Owens River of California.

The Federation of Fly Fishers, a nonprofit organization based in Montana, issued an emergency angler warning this month calling on anglers to do everything they can to avoid spreading mudsnails. "They're one of the dirtiest secrets going," said Bob Wiltshire, a spokesman for the organization. "They're so easily spread."

But a heightened consciousness among fishermen may not be enough. As if to prove their ultimate fitness, mudsnails are difficult to kill.

Heat, dryness kill snails Pat Dwyer, a retired biologist for the U.S. Fish and Wildlife Service, ran a variety of experiments in 1999 through 2000 looking for the best way to destroy mudsnails on fishing gear. He tried immersing gear in water containing chlorine or copper sulfate -- but that failed, probably because of the mudsnail's stealth operculum.

"We thought they'd probably succumb quite readily," Dwyer said. "All they had to do is hold their breath and close their operculums."

Moreover, snails affixed to fishing gear were found to still be alive after 15 days, as long as humidity was high.

But Dwyer finally found the secret weapons: heat and dryness. All snails in his experiments died if they were immersed in 113-degree Fahrenheit water for 60 seconds. They also died after 24 hours at humidity below 5 percent.

The fly fishers federation urges anglers to thoroughly clean and rinse all equipment before leaving a fishing site, completely dry all equipment before using it again and never to release a fish in water it did not come from.

Richards is pessimistic, however, about efforts to halt the spread of mudsnails. The best that can be hoped for, he said, is slowing inevitable invasions. "There is no reason to think that they won't get to every river system in the Western United States. They're going to get everywhere eventually."

It's not known precisely how mudsnails first got to the Snake River.

At first, Richards said, scientists thought the snails were passengers in a batch of fish eggs brought to a trout farm from New Zealand. But recent analysis shows that the mudsnails here are genetically matched with populations living in Australia.

Richards thinks it unlikely that trout eggs were shipped to Idaho from Australia, making the mudsnail's arrival as vague as its march westward seems inevitable.

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# Tougher laws on alien fish urged

Snakehead experts begin drafting limits on import, sale of aquatic life in Md.

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By Candus Thomson

Sun Staff

Originally published August 21, 2002

As lily pads began to die yesterday on the poisoned, snakehead-infested pond in Crofton, a man on the Eastern Shore was advertising in a local newspaper to sell an "aquarium sized" snakehead for \$5.

It's perfectly legal, despite the nationwide furor caused this summer by a pair of pet northern snakeheads turned loose in the wild by a Maryland man.

Yesterday, the experts who authored the plan to exterminate the Crofton snakeheads urged Maryland to toughen its laws so other aquatic aliens can't terrorize state waters.

The task force of scientists met yesterday in downtown Baltimore to begin drafting recommendations for regulating what fish can be imported and sold here. A preliminary report is expected Friday and the final version is due Sept. 1.

However, the number of legal loopholes that need closing could make the panel's job more daunting than it seems. For example:

- Maryland prohibits the release of exotic fish in fresh water, but does not extend that protection to tidal waters. The penalty is just \$100.
- State law doesn't define fish as wildlife, so the authority given to the Department of Natural Resources to deal with animal problems does not extend to aquatic life.
- Finally, lawmakers in Maryland - unlike in other states - have been stingy in giving the secretary of DNR the power to deal with emergencies. In the case of the northern snakehead, that resulted in protracted negotiations with the owners of the three Crofton ponds to gain access for the poisoning operation.

"If we had had to go to court, it's hard to say what our legal argument would have been," said Assistant Attorney General Stuart Buppert, who called the state's laws "deficient."

The state is powerless to stop the buying and selling of live snakeheads, such as the one being shopped around by Jimmy Vickerson. The 49-year-old Cambridge man bought the ad after realizing he couldn't take his snakehead to his new apartment. His cousin had given it to him for a pet, but "it got too big."

"People called right off," he said yesterday. "I got 100 calls."

With Interior Secretary Gale A. Norton expected to ban the importation and interstate sale of all 25 species of snakeheads before the month is out, that invasion appears headed toward containment.

But officials fear other alien species are waiting on the doorstep, and as one of 22 ports of entry in the United States for fish, the Baltimore area could become a welcome mat.

DNR Secretary J. Charles Fox said trying to compile a list of undesirable species in time for next year's legislative session would be an almost impossible task for his handful of fisheries biologists.

While the Crofton snakehead story has raised awareness about invasive species, Fox was reluctant to say that it will translate into successful legislation in Maryland. "I'm going to wait for the results of the panel and have discussions with the governor's office and legislative leadership," he said.

Meanwhile, state and federal biologists inspected the ponds yesterday for early signs that the herbicides sprayed Sunday morning were working. Some lily pads showed brown spots but others looked healthy. There were no signs of dead fish.

John Galvez of the U.S. Fish and Wildlife Service said that because the ponds had low oxygen levels before the poisoning, fish may have adapted to those conditions and it may take almost total defoliation to remove sufficient oxygen to kill the fish.

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# Beaverhead 3rd site for snails

## Associated Press

DILLON (AP) - State officials said they have found New Zealand mud snails in the Beaverhead River south of here, the third confirmed case in Montana.

The mud snails are a nonnative species whose affect on the ecosystem remains unknown. The state Department of Fish, Wildlife and Parks has classified the pinhead-size mollusks as a nuisance species.

The snails first appeared in the United States at a fish hatchery in Idaho. In the past few years, the snails have been found in the Madison River, the Yellowstone River south of Livingston and in Darlinton Ditch, a spring creek along the lower Madison. They've also spread to other states and to Yellowstone National Park.

Officials said the snails eat algae that would normally feed mayflies and other insects that fish eat. But Bruce Rich, FWP's regional fisheries manager, said the snails have not been linked to any decline in fish numbers so far.

An angler tipped state officials to snails in the Beaverhead. No one is sure how far the tiny intruders will spread or what their influence could be.

FWP officials have asked anglers to help prevent the snails from spreading to new areas. That means removing mud from boots and waders, and drying fishing equipment in a warm, dry place, Rich said.

Craig Matthews, owner of Blue Ribbon Flies in West Yellowstone, said he has seen fewer of the snails in recent years.

Matthews said he hasn't noticed any decline in aquatic or insect life, and he watches bugs closely when he fishes the Madison every spring.

"I haven't seen any impacts at all," he said.

Last year, FWP proposed poisoning a mile of Darlinton Ditch to keep the snails from spreading to the nearby lower Madison. That would have killed most other life in the stream, and the project was put on hold after the snails showed up in the lower Madison.

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# Monkey bites investigated (8/02)

By Chery Sabol

The Daily Inter Lake

A pet monkey that has bitten several people in the valley has raised health concerns.

"We know of three for sure, maybe four" victims, said nurse Dan Dickman of the city-county health department.

The monkey is a 5-pound macaque whose owner has brought it into public places, Dickman said.

The owner hasn't been charged with any violations and isn't named. But his pet quickly earned a reputation.

"The thing is very territorial. It ended up biting people," Dickman said.

One incident was at a restaurant at the Whitefish mall. Another, possibly involving two people, was at The Apple Barrel Fruit Stand Inc. on U.S. 2 near the airport. Another case was reported at a residence.

The bites were deep enough to break the skin on victims, raising concerns about disease transmission, Dickman said.

"We're worried about it," he said.

Concerns include tetanus, herpes B, tuberculosis, rabies and hepatitis B, Dickman said.

The monkey has been sent to Great Falls to be quarantined, he said. Test samples have gone to Loma Linda, Calif., for analysis, he said.

Macaques legally cannot be shipped into the country "because they are a carrier of diseases that can be passed on to humans," Dickman said. The animals are used in laboratory tests.

This monkey is the descendant of several generations of breeding in this country, Dickman said.

Two of the people who were bitten went in for immediate medical treatment, he said. All are awaiting test results on the monkey.

The greatest concern is transmission of herpes B.

"They call it the monkey virus," Dickman said.

Though rare, the virus kills 70 percent of people who contract it, he said.

"Herpes B is scary," he said.

Animal warden Richard Stockdale was unavailable Monday for comment.

County Attorney Tom Esch said there are ordinances against having a vicious dog, but none against owning a savage simian.

"I haven't ruled out endangerment" charges, Esch said Monday.





